

## **PLATING SYSTEM FOR BONE FIXATION AND SUBSIDENCE AND METHOD OF IMPLANTATION**

### **Abstract**

[98] A bone plating system is provided that permits maintenance of a compression force while also accommodating bony subsidence, among other features. Methods of implantation are also provided that improve alignment and placement during implantation and avoid maneuvers that weaken the vertebral bodies. A modular distraction screw is placed during the initial stages of surgery when all relevant landmarks are still intact. After completion of the surgical bone work, a proximal end of the distraction screw is detached, leaving a protruding distal segment implanted in the centerline of the vertebral bodies above and below the newly fused disc space. A bone plate is guided into proper position relative to the upper and lower vertebra by attaching the bone plate to the protruding distal segments. The distal segments of the distraction screws are tightened onto the plate and the plate is held stationary while bone screws are placed. The bone plating system is also extendable, allowing additional bone plates to be placed and coupled with existing plate components to create a multi-level plating system. Additional bone plates may be placed contemporaneously or during a subsequent surgical procedure.